

REMARKS

In response to the Office Action dated August 10, 2005, Applicants respectfully request reconsideration and withdrawal of the rejections of the claims. The indication that claims 6, 14, 16, 17 and 21-23 contain allowable subject matter is noted with appreciation.

At the outset, it is to be noted that copies of certain cited references were not included with the Office Action. A telephone message was left with the Examiner, and a follow-up paper requesting copies of these references was filed on September 22, 2005. These requested copies have not yet been received. The Examiner is respectfully requested to include copies of the missing references with his next communication.

The Office Action states that the French-language reference submitted with the Information Disclosure Statement filed December 6, 2001, has not been considered. It is respectfully submitted that Applicants have complied with the requirements for consideration of the reference. M.P.E.P. §609.04(a), Subsection III, states:

Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an "X", "Y" or "A" indication on a search report.

It is respectfully submitted that the Information Disclosure Statement filed December 6, 2001, complies with these guidelines. The Information Disclosure Statement was accompanied by an English-language version of the International

Search Report for the corresponding PCT application. In that search report, the French-language reference is identified under category "A". In view thereof, it is respectfully submitted that Applicants are entitled to have the reference considered in this application, and the Examiner is requested to indicate such consideration and make the reference of record.

The Office Action objected to the original drawings as being fuzzy, and required Figure 1 be labeled "Prior Art". In response thereto, replacement drawings are being filed herewith and are submitted to overcome the objections set forth in the Office Action.

The Office Action requires the Abstract to be presented on a separate page. Accordingly, a duplicate copy of the Abstract appears on a separate page at the end of this Amendment.

The Office Action notes that the British spelling of certain words is used in the disclosure, and requires them to be changed. The Examiner's attention is directed to M.P.E.P. §608.01. In the paragraph bridging pages 600-63 and 600-64 of the August 2005 revision of the Manual, it states that Examiners should not object to the specification merely because it employs British English spellings rather than American English spellings. The Manual states "It is not necessary to replace the British English spellings with the equivalent American-English spellings in the U.S. patent applications." (emphasis in original). Withdrawal of the requirement is therefore respectfully requested.

At item 9, the Office Action notes that the specification contains the acronym "FIBs", and asserts that the term is not fully spelled out. The complete phrase in which this acronym appears is "using work stations with *focus ion beams* or FIBs." It

is respectfully submitted that the meaning of the acronym FIBs is clear from this statement, namely it refers to focus ion beams.

With reference to item 10 of the Office Action, it is to be noted that the appearance of the term "Java" on page 6 of the application is consistent with the guidelines for the use of trademarks. Specifically, the term is capitalized, and appears together with the generic term "language" to which the mark pertains.

In response to item 11 of the Office Action, the title has been amended to further describe the subject matter of the claimed invention.

Claims 8-10 were rejected under the second paragraph of 35 U.S.C. § 112. The Office Action states "The problem is the Applicant states the program to be monitored (DATA)." This statement is not understood. In particular, it is not apparent what the term "(DATA)" refers to, since it does not appear in the claims. If the rejection is not withdrawn, clarification is respectfully requested.

In any event, it is respectfully submitted that claims 8-10 comply with the requirements of 35 U.S.C. § 112, second paragraph. The Office Action states that the focus of the claim language should be functionality of the monitor program. Claim 8 recites a feature of the monitoring method that is carried out when a particular condition is present, namely when the program being monitored includes at least one jump. As set forth in claim 8, when this condition occurs, the monitoring method of claim 1 is separately applied to sets of instruction which do not include jumps. This claimed feature is illustrated, for example, in Figure 7. The sequence of instructions includes a jump instruction, E11-j. In this case, therefore, the monitoring method is applied separately to each of the three sets of instructions E11, E12 and E13. It is respectfully submitted that this feature of the invention is set forth

in claim 8 in a clear and definite manner. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1-5, 7-13, 15, 18-20, 24-26, 28, 30 and 31 were rejected under 35 U.S.C. § 102, on the grounds that they were considered to be anticipated by the Berglund et al patent (US 4,266,272). Claim 29 was rejected under 35 U.S.C. § 103, on the basis of the Berglund patent in further view of the Graham et al patent (US 6,402,028). For the reasons presented below, it is respectfully submitted that these references do not disclose, nor otherwise suggest, the claimed subject matter to a person of ordinary skill in the art.

The claimed invention is directed to a method and system for monitoring the progress of the execution of a sequence of instructions in a computer program. In essence, as each of the instructions is being loaded into a processor to be executed, it is monitored to verify that all of the instructions in the sequence being executed are consistent with reference data recorded with the program. This monitoring process is performed while the program is being executed by the processor.

It is respectfully submitted that the Berglund patent does not disclose the monitoring of instructions as they are being executed by a processor. Rather, that patent is concerned with the storage of control words, e.g. microinstructions. The patent is directed to computer systems in which the control words are stored in control storage for execution. More specifically, the patent discloses a system in which the control storage does not have capacity for all of the control words that may be required. Therefore, with reference to Figure 1-2, the control storage 15 is divided into two parts, resident storage 16 and transient storage 18. The resident storage contains the control word sequences that support the most frequently used

instructions. The remaining control words are stored in main storage 10 (Figure 1-1), and transferred on demand from main storage into the transient area of the control storage. The transfer of the control words from the main storage into the transient storage area is referred to as an overlay operation.

As noted in the background portion of the Berglund patent, when control words reside in main storage, the possibility exists that the control words can be unintentionally modified by other programs which have access to main storage. The Berglund patent discloses a technique for detecting whether control words in main storage have been modified. This technique is carried out when the control words are transferred from main storage to control storage. Unlike the present invention, the technique of the Berglund patent does not operate to monitor the progress of the execution of a sequence of instructions by a computer program. Rather, its purpose is to verify the integrity of control words that are written into control storage from main storage. As noted in the paragraph bridging columns 2 and 3 of the patent:

During the transfer of the control words from main storage into control storage certain facilities of the central processing unit are not being utilized. These facilities of the central processing unit would normally be utilized when executing a control word read from control storage.

From this passage, it is believed to be apparent that the control words are not being executed during the time that they are transferred from main storage to control storage. Thus, the technique disclosed in the Berglund patent, which verifies the integrity of the control words as they are being transferred from main storage to control storage, does not function to monitor the progress of the execution of a sequence of instructions.

Claim 1 recites a method which includes, among other steps, those of "analyzing the sequence of instructions transmitted to a processor intended to execute the program being monitored by extracting a data item from each instruction.... and performing a calculation on said data item," and "comparing the result of said calculation to reference data." The claim further recites that the reference data comprises a pre-established value that corresponds to the result of the analysis "only if all the instructions in the sequence of instructions have actually been analyzed *during the running of the program*." Thus, claim 1 explicitly recites that the method for monitoring the progress of the execution of a sequence of instructions occurs during the running of the program. As noted in the foregoing quote for the Berglund patent, its technique for verifying the integrity of control words is not carried out during the execution of a program. Rather, it is performed *prior* to execution, as the control words are being transferred from main storage to control storage.

For at least this reason, therefore, it is respectfully submitted that the Berglund patent does not anticipate the subject matter of claim 1, or any of its dependent claims. Each of the other independent claims recites the concept of analyzing a sequence of instructions during the running of a program. Since the Berglund patent does not disclose the monitoring of a program during its execution, it cannot be interpreted to anticipate these claims, or any of their dependent claims.

Accordingly, it is respectfully submitted that the claimed subject matter is not anticipated by the disclosure of the Berglund patent. Furthermore, it is respectfully submitted that the Graham patent does not contain any teachings that overcome the differences between the claimed subject matter and the Berglund patent.

Reconsideration and withdrawal of the rejections, and allowance of all pending claims is respectfully requested.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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AMENDMENTS TO THE DRAWINGS:

Replace the original drawing containing Figures 1-7 with the accompanying replacement sheets containing the same figures.